

Science



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1 Choose the correct answer:

Light

1. Light travels (transmits) (propagates) in lines.
a curved **b** straight **c** broken
2. Light traveling in a straight line is the principle ideal of making the
a radio **b** camera **c** electric iron **d** dynamo
3. materials don't allow light to travel through.
a Transparent **b** Translucent **c** Semi-transparent **d** Opaque
4. A sheet of aluminum foil is an example of materials.
a Transparent **b** Translucent **c** Semi-transparent **d** Opaque
5. The nearer the object is to the light source, the its shadow.
a smaller **b** bigger **c** fainter
6. The speed of light in air is that in water.
a faster than **b** slower than **c** equal to
7. The change of light direction when it passes from medium to another is called
a light reflection **b** light refraction **c** light diffraction
8. The change of light direction when it falls on smooth and shiny surfaces is called
a light reflection **b** light refraction **c** light diffraction
9. Light when it passes from water to air.
a refracts **b** reflects **c** separates **d** scatters
10. Light when it falls on smooth and shiny surfaces.
a refracts **b** reflects **c** separates **d** scatters
11. A pencil seems to be broken at water surface due to of light.
a reflection **b** refraction **c** separation **d** absorption
12. The prism separates sunlight into colors.
a 3 **b** 5 **c** 7 **d** 9

Seeing colored objects

13. A blue t-shirt seems behind red glass sheet.
a blue **b** red **c** black
14. When you look at a red apple through a yellow glass sheet, the apple seems
a red **b** black **c** green **d** yellow

15. Red light + Green light + Blue light =
☐ a Magenta ☐ b Yellow ☐ c White
16. Black opaque objects all light colors.
☐ a absorbs ☐ b reflects ☐ c transmits ☐ d All of the previous
17. Red, green and blue lights are lights.
☐ a primary ☐ b secondary ☐ c complementary
18. Magenta, cyan and yellow lights are lights.
☐ a primary ☐ b secondary ☐ c complementary
19. Mixing red and blue gives
☐ a cyan ☐ b magenta ☐ c yellow
20. Mixing red and green gives
☐ a cyan ☐ b magenta ☐ c yellow
21. Mixing green and blue gives
☐ a cyan ☐ b magenta ☐ c yellow
22. Mixing red, green and blue gives
☐ a cyan ☐ b magenta ☐ c yellow ☐ d white
23. Mixing all the primary-colored lights gives color.
☐ a red ☐ b green ☐ c blue ☐ d white
24. As light falls on a banana, the banana absorbs all colors except the color.
☐ a red ☐ b green ☐ c blue ☐ d yellow

Magnetism

25. The natural magnet was discovered years ago.
☐ a 2000 ☐ b 2500 ☐ c 3500 ☐ d 4000
26. used to locate the main four direction.
☐ a Compass ☐ b Dynamo ☐ c Prism
27. When a magnet is suspended (hanged) freely, the magnet takes direction
☐ a north-south ☐ b east-west ☐ c north-east ☐ d north only
28. When a magnet is suspended (hanged) freely, its north pole refers to the
☐ a north ☐ b south ☐ c east ☐ d west
29. When a magnet is suspended (hanged) freely, its north pole refers to the
☐ a north ☐ b south ☐ c east ☐ d west
30. The magnet has pole(s).
☐ a 4 ☐ b 3 ☐ c 2 ☐ d 1

31. Which of the following is a magnetic material?
a Nail **b** glass **c** paper **d** chalk
32. The space around a magnet in which the magnetic force appears is
a magnetic pole **b** magnetic substance **c** magnetic field
33. All of the following materials are not attracted to the magnet except
a plastic **b** paper **c** glass **d** nickel
34. The natural magnet is one of the ores.
a copper **b** aluminum **c** iron
35. Different magnetic poles each other.
a repel **b** attract **c** intersect
36. is attracted to the magnet.
a Glass **b** Cobalt **c** Chalk **d** Aluminum

Magnetism and electricity

37. The huge electromagnet is used in
a electric bells **b** cranes **c** telephones
38. scientist who invented the dynamo.
a William Gilbert **b** Faraday **c** Hertz
39. The dynamo generates energy from mechanical (kinetic) energy.
a thermal **b** electrical **c** light **d** kinetic
40. The coil of a dynamo is made up of
a copper **b** carbon **c** iron
41. Electric energy is converted into magnetic energy in
a electromagnet **b** dynamo **c** electric bell
42. The dynamo is fixed in the bicycle touching the bicycle's
a seat **b** pedal **c** tires

Mixtures

43. is used to separate a mixture of oil and water.
a Evaporation **b** Filtration
c Separating funnel **d** Magnetic attraction
44. The mixture of iron filings and sand can be separated by
a Evaporation **b** Filtration
c Separating funnel **d** Magnetic attraction
45. Solution is a
a solid substance **b** mixture **c** pure substance

Solutions

46. The most common solvent is
a alcohol **b** water **c** benzene
47. The material that dissolves to produce a solution is called
a solute **b** solvent **c** mixture
48. The result of solubility process is called
a solute **b** solvent **c** solution
49. The speed of solubility increases by
a increasing the amount of solvent. **b** increasing the amount of solute.
c decreasing temperature
50. Increasing temperature solubility time.
a increases **b** decreases **c** has no effect
51. Increasing the amount of solvent solubility time.
a increases **b** decreases **c** has no effect
52. Increasing the amount of solute speed of solubility.
a increases **b** decreases **c** has no effect
53. The solute in chocolate-milk solution is the
a milk **b** water **c** chocolate
54. The solute in the salty solution is
a sugar **b** water **c** salt
55. The solvent in chocolate-milk solution is the
a milk **b** water **c** chocolate
56. Water is a common solvent because substances dissolve in it.
a thousands of **b** few **c** no
57. Stirring the speed of the solubility process.
a increases **b** decreases **c** has no effect on
58. Solubility time decreases by increasing
a temperature **b** amount of solvent **c** both of them
59. The speed of solubility process by increasing the temperature.
a increases **b** decreases **c** has no effect
60. The most common solvent is
a alcohol **b** water **c** benzene
61. All of these factors affect solubility process except
a temperature **b** color of solvent **c** stirring **d** type of solute

Environmental Balance unit

62. An example of decomposers (saprophytic organisms) is
a fungi **b** rabbits **c** cats
63. takes place by some living organisms to hide from their enemies.
a Camouflage **b** Parasitism **c** Commensalism
64. Green plants are considered as
a decomposers **b** consumers **c** producers
65. A water pond is a ecosystem.
a small **b** large **c** very large
66. In the food relationship between a man and a bilharzias worm, the man is a
a predator **b** prey **c** host **d** parasite
67. The relation between bilharzia worm and man is
a mutualism **b** symbiosis **c** predation **d** parasitism
68. The process of photosynthesis is done by a living organism.
a decomposer **b** consumer **c** producer
69. The types of parasites are
a external **b** internal **c** All of the previous
70. The relationship between sponge and tiny aquatic living organisms is
a parasitism **b** predation **c** commensalism
71. All of the following are external parasites except
a lice **b** ticks **c** liver worm **d** lamprey
72. The food relationship between a cat and a rat is an example of
a parasitism **b** predation **c** symbiosis
73. Bilharzia worm is an parasite.
a external **b** internal **c** both
74. The animal that devours another animal is called
a parasite **b** predator **c** prey
75. Bees looking like wasp is phenomenon.
a camouflage **b** commensalism **c** mimicry
76. Mosquito conveys disease to man.
a malaria **b** plague **c** cancer **d** elephantiasis
77. Predation relationship the number of preys in populations.
a increases **b** decreases **c** organizes

2 Write the scientific term:

1. The main source of light on the Earth.
2. Materials that allow some colored light to pass through them.
3. The seven colors which the white light is made up of.
4. The light energy that can be seen.
5. Phenomenon formed in the sky after rain and sun still shining.
6. Darkened area foamed behind an object once light falls on it.
7. The light that we can get by mixing two of the primary colored lights.
8. Red, green and blue colored lights.
9. Yellow, magenta and cyan colors.
10. The change of light rays directions when they transmit the separate surface between two different transparent media.
11. The light that we can get by mixing two of the primary colored light.
12. Materials that don't allow light to transmit through and objects can't be seen through.
13. The light resulted from mixing of red light and blue light.
14. Materials allow most light to pass through them.
15. A set that is used for locating the main four geographical directions.
16. One of the iron ores which is known as magnetite.
17. A set used to change electric energy into magnetic energy.
18. A device used to convert kinetic energy into electric energy.
19. The materials that are attracted to the magnet.
20. The materials that don't get attracted to the magnet.
21. The magnetic pole which is attracted to the north pole of another magnet.
22. Regions of the magnet, where the magnetic force is most powerful.
23. The force by which the magnet attracts some materials.
24. A substance that consists of more than one type of particles.
25. It is the process by which a solute dissolve in a solvent leading to the disappearance of solute.
26. Mixture which is composed of a solute and a solvent.
27. The substance which dissolves (disappears) in a solvent.

28. It is the substance in which the solute disappears (dissolves).
29. Substance that consists of only one type of identical particles.
30. A process that is used to separate a solid material dissolved in water.
31. A type of substance in which their components can be separated easily.
32. A method that is used to separate iron filings from sand.
33. Process used to separate the solid materials that are insoluble in water.
34. A process used to separate salt from water.
35. Liquid used to dissolve the solute to make a solution.
36. The mixture results from the solubility of solids in liquid.
37. An apparatus used to separate immiscible liquid mixtures.
38. A set that is used to separate water-oil mixture.
39. It is the food relationship among living organisms in which one living organism devours another one.
40. The harmed organism in parasitism relationship.
41. Kind of plants that devour insects.
42. Any natural area contains living organisms and non-living things.
43. A phenomenon in which living organisms change their color to be hidden from enemies.
44. The temporary food relationship that end by devouring the prey or a part of it.
45. A temporary relationship between two different organisms with a benefit to one and harm to the other.
46. It is the internal parasite which causes bilharzia disease.
47. Food relationship between nodular bacteria and leguminous.
48. The food relationship between two living organisms that benefit from each other.



3 Give reason for:

1. ★ The image through narrow holes is inverted and minimized.
 - ★ Formation of shadow when light falls on an opaque body.
 - ★ The formation of image through narrow holes.
 - ★ Formation of shadow.

2. We see a picture behind the glass clearly.

3. Light spectrum is formed.

4. A clear glass sheet is a transparent material.

5. A raft paper is a translucent material.

6. Aluminum is an opaque material.

7. Spoon appears broken in transparent cup filled with water.

8. When light fall on a white paper, it appears white color.

9. The Banana appears yellow when sunlight falls on it.

10. The red apple seems black when you look at it through a green glass sheet.

11. We must wear white clothes in summer season.

12. We wear black clothes in winter.

13. Yellow is called a secondary colored light.

14. Iron is a magnetic material.

15. Plastic is a non-magnetic material.

.....

16. Compass needle deflects when an electric current passes through a wire near it.

.....

17. Sugar is a pure substance.

.....

18. Air is considered as a mixture.

.....

19. Tomato sauce is a mixture.

.....

20. It is possible to separate iron filings from sand by using magnetic attraction.

.....

21. Water is a common solvent.

.....

22. Drosera is an insectivorous plant.

.....

23. Predation is temporary food relationship.

.....

24. Predation is less common in plant world than in animal world.

.....

25. A butterfly stands on a tree with the similar color.

.....

26. Bilharzia worm is considered a parasite.

.....

27. Parasitism relationship differs from predation relationship.

.....

28. The host's death is considered a loss to the parasite.

.....

4

Complete each of the following sentences:

1. The object's image formed through narrow holes is and
2. The material in which light can transmit through is called
3. The spectrum colors start with and end with
4. We can see , when sunlight passes through water droplets during rain fall.
5. When light passes from water to air, it because light speed in air is than that through water.
6. Sunlight is separated into colors by passing it through a
7. From primary colored lights , and from secondary colored lights
8. From primary light colors: , and
9. Secondary colors are , and
10. objects seems having the same color of the light which it reflected.
11. Mixing and lights gives cyan light.
12. Light speed through air is than that through water.
13. The prism separates sunlight into
14. The color lies between the green color and the indigo color.
15. On mixing two primary light colors, a light color is produced.
16. The whiteboard all the light colors, while the blackboard the light colors.
17. The magnet is black stone made of iron ores which called
18. Like poles each other, whereas unlike poles each other.
19. The substances can be divided into and due to their magnetic ability.
20. The magnetic force is most powerful at the of the magnet.
21. The like poles each other, whereas the poles attract each poles.
22. The contains a small light magnet that moves freely around a fixed axis.
23. The idea of electric generator is change energy into energy.
24. Electromagnet changes energy to energy.
25. The coil of a dynamo is made up of wire.
26. Mixing a small amount of sand with water forming a that can be separated by
27. The relationship between sponge and tiny aquatic living organisms is
28. The speed of solubility by increasing stirring process.
29. Sand-water mixture can be separated by

30. Solid materials can be mixed by or
31. A liquid mixture formed of a solute and a solvent is called
32. The Solubility process needs the presence of and
33. Increasing decreases solubility time.
34. is a general solvent because of its ability to dissolve most materials.
35. worm causes elephantiasis disease.
36. Mosquito is an parasite, while ascaris worm is an parasite.
37. is any area including living and nonliving organisms.
38. The food relationship between nodular bacteria and bean, whereas the food relationship between fungi and dead bodies is
39. Mosquitoes convey disease, while ascaris worm cause disease.
40. The relationship between sponge and tiny aquatic living organisms is
41. A butterfly uses as it stands on a tree with a similar color.
42. Green plants are known by organisms.
43. Food relationship in which both organisms benefit from each other is
44. Ecosystem may be small as or large as

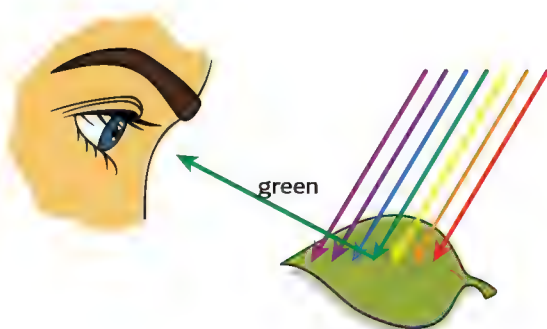
5 What happens when?

1. You put an opaque object between a lightened torch and the wall.
.....
2. You look at a street through a translucent window.
.....
3. You look at a lightened candle through three screens with centered holes in one straight line.
.....
4. Yellow light falls on black object.
.....
5. Mixing green and blue lights.
.....
6. You approach a magnet to cobalt and chalk mixture.
.....
7. A magnet is hanged to move freely.
.....

8. You sprinkle some iron filings on a paper sheet which has a strong magnet under it
.....
9. An electric current passes through a coiled wire around wrought iron bar.
.....
10. You put the copper wire which is connected with ammeter (to measure the electric current intensity) between the two poles of magnet.
.....
11. You shake an amount of sugar with water.
.....
12. You heat salty water.
.....
13. Some types of frogs are attacked by enemies.
.....
14. A cuttlefish is attacked by enemies.
.....
15. There are no nodular bacteria in the roots of leguminous plants as beans.
.....
16. You splash some water drops on a slice of bread, put it in a closed bag and leave it for a few days in the dark.
.....
17. Saprophytes disappear from earth.
.....

6 Answer each of the following:

1. What is the color of each object?



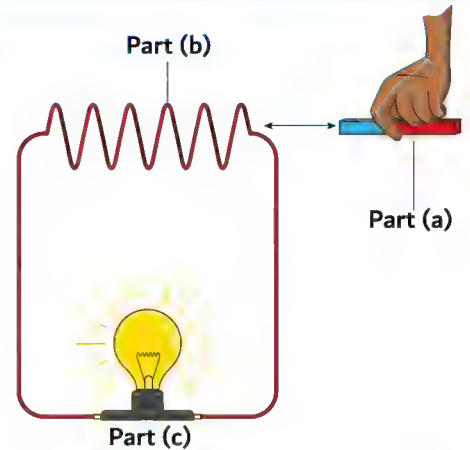
2. Look at the opposite figure, then answer the following:

1) Label the figure:

Part (a): Part (b): Part (c):

2) The figure represents:

3) The apparatus is used to change energy into energy.



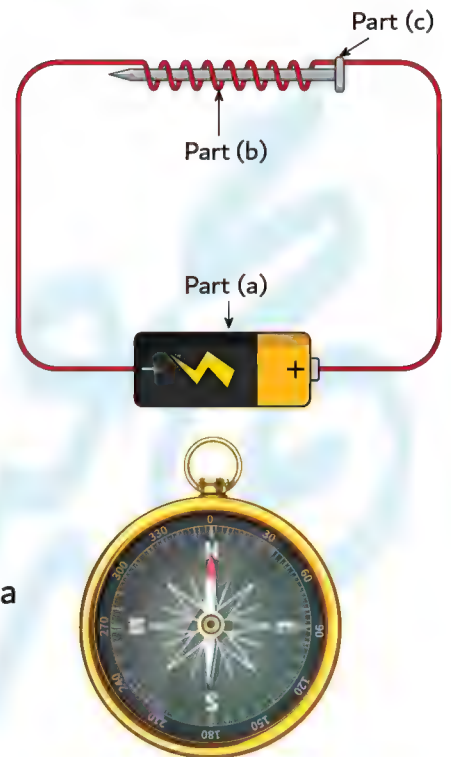
3. Look at the opposite figure, then answer the following:

1) Label the figure:

Part (a): Part (b): Part (c):

2) The figure represents:

3) The apparatus is used to change energy into energy.



4. Look at the opposite figure, then answer the following:

1) The opposite figure represents

2) The device consists of that can spin freely around a fixed axis.

3) It is used to



7

How can you separate each of the following mixtures:

1. Chalk and water.
2. Sand and water.
3. Sand and salt.
4. Paper clips and sugar.
5. Iron and salt.
6. Oil and water.
7. Salty solution.
8. Sugary solution.

8 Mention the following:

1. Properties of light.

2. The difference between regular and irregular reflection.

3. The idea of the camera.

4. Properties of mixtures.

5. The difference between solute and solvent.

6. The difference between predator and prey.

7. The difference between parasite and host.

9 Identify the food relation among the following organisms:

1. Sponge and tiny aquatic living organism.

2. Man and liver worm.

3. Leguminous plants and nodular bacteria.

4. A cat and a rat.

5. A lion and a deer.

6. Bread mold fungus.

7. Bilharzia worm and man.

انتهينا بفضل من
الله وتوفيقه ...



Model Answers

1 Choose the correct answer:

- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1. b | 17. a | 33. d | 49. a | 65. a |
| 2. b | 18. b | 34. c | 50. b | 66. c |
| 3. d | 19. b | 35. b | 51. b | 67. d |
| 4. d | 20. c | 36. b | 52. a | 68. c |
| 5. b | 21. a | 37. b | 53. c | 69. c |
| 6. a | 22. d | 38. b | 54. b | 70. c |
| 7. c | 23. d | 39. b | 55. a | 71. c |
| 8. a | 24. d | 40. a | 56. a | 72. b |
| 9. a | 25. a | 41. a | 57. a | 73. b |
| 10. b | 26. a | 42. c | 58. c | 74. b |
| 11. b | 27. a | 43. c | 59. a | 75. c |
| 12. c | 28. a | 44. d | 60. b | 76. a |
| 13. c | 29. a | 45. b | 61. b | 77. c |
| 14. b | 30. c | 46. b | 62. a | |
| 15. c | 31. a | 47. a | 63. a | |
| 16. a | 32. c | 48. c | 64. c | |

2 Write the scientific term:

- | | | |
|--|---------------------------|--|
| 1. The sun | 18. Dynamo | 35. Solvent |
| 2. Semi-transparent (trans-lucent) materials | 19. Magnetic material | 36. Solid-liquid mixture |
| 3. Spectrum colors | 20. Non-magnetic material | 37. Separating funnel |
| 4. The visible spectrum | 21. South pole | 38. Separating funnel |
| 5. Rainbow | 22. Magnetic field | 39. Predation |
| 6. Shadow | 23. Magnetic force | 40. Host |
| 7. Secondary colored lights | 24. Mixture | 41. Insect-eater
(insectivorous) plants |
| 8. Primary colored lights | 25. Solubility process | 42. Ecosystem |
| 9. Secondary colored lights | 26. Solution | 43. Camouflage |
| 10. Light refraction | 27. Solute | 44. Predation |
| 11. Secondary light color | 28. Solvent | 45. Predation |
| 12. Opaque materials | 29. Pure substance | 46. Bilharzia worms |
| 13. Magenta color | 30. Evaporation | 47. Mutualism |
| 14. Transparent materials | 31. Mixtures | 48. Mutualism |
| 15. Compass | 32. Magnetic attraction | |
| 16. Natural magnet | 33. Filtration | |
| 17. Electromagnet | 34. Evaporation | |

3 Give reason for:

1. Because light travels in straight lines.
2. Because glass is a transparent material that allows most light to pass through and we can see objects clearly through it.
3. Due to the separation of white light into seven spectrum colors.
4. Because it allows most light to pass through and we can see objects clearly through it.
5. Because it allows some light to pass through and we cannot see objects clearly through it.
6. Because it doesn't allow light to pass through and we cannot see objects through it.
7. Due to refraction of light.
8. Because the white paper absorbs all light colors.
9. Because the banana fruit absorbs all light colors and reflects the yellow color only.
10. Because the red apple reflects the red color which is absorbed by the green glass sheet and doesn't transmit through it, so the apple seems black.
11. Because white clothes reflect all light colors that fall on them causing the decrease of feeling of heat.
12. Because black clothes absorb all light colors that fall on them causing the feeling of warmth.
13. Because it is produced by mixing two of the primary colored lights.
14. Because it is attracted to the magnet.
15. Because it is not attracted to the magnet.
16. Because the electric current has a magnetic effect, where it generates a magnetic field.
17. Because it consists of only one type of identical particles.
18. Because it consists of more than one type of particles such as nitrogen gas, oxygen gas, carbon dioxide gas and water vapor.
19. Because it consists of more than one type of particles such as tomato, oil and water.
20. Because iron filings are magnetic materials that are attracted to the magnet.
21. Because thousands of solid materials dissolve in it.
22. Because it preys some insects to get its required elements for making protein.
23. Because it ends up by devouring the prey or a part of it.
24. Because plants are autotrophic organisms that can make their own food by photosynthesis process.
25. To hide from its enemies.
26. Because it lives internally inside the host's body and shares the host its digested food or feed on its tissues and cells.
27. Because the parasite depends completely on the host to get its food and causes weakness to the host, but doesn't kill it as the predator does with its prey.
28. Because the parasite will lose its source of food and shelter.

4 Complete each of the following sentences:

- | | | |
|-----------------------------|-----------------------------|-------------------------|
| 1. minimized - inverted | 16. reflects | 30. stirring - shaking |
| 2. transparent | 17. absorbs | 31. solution |
| 3. red - violet | 18. repel - attract | 32. solute - solvent |
| 4. rainbow | 19. magnetic - non-magnetic | 33. temperature |
| 5. refracts - greater | 20. poles | 34. Water |
| 6. seven - prism | 21. repel - attract | 35. Filaria |
| 7. red - cyan | 22. compass | 36. external - internal |
| 8. red, green and blue | 23. mechanical - electric | 37. Ecosystem - natural |
| 9. cyan, magenta and yellow | 24. electric - magnetic | 38. mutualism - |
| 10. Opaque | 25. copper | saprophytism |
| 11. green - blue | 26. solid-liquid mixture - | 39. malaria - anaemia |
| 12. greater | filtration | 40. commensalism |
| 13. seven colors | 27. commensalism | 41. camouflage |
| 14. blue | 28. increases | 42. producer |
| 15. secondary | 29. filtration | 43. mutualism |
| | | 44. water pond - forest |

5 What happens when?

1. A clear shadow of the object is formed.
2. I can see the street clearly.
3. I can see the flame of the candle, because light travels in straight lines.
4. The black object absorbs the yellow light.
5. Cyan color is produced.
6. Cobalt is attracted to the magnet and separated from the mixture.
7. It takes a fixed direction which is north-south direction.
8. The iron filings are arranged around the magnet in a regular way and attracted at the two poles of the magnet.
9. The iron bar becomes a temporary magnet called "electromagnet".
10. Electric current is produced and the pointer of the ammeter deflects.
11. A homogeneous mixture (sugar solution) is formed.
12. Water evaporates, leaving the salt in the cup.
13. It changes its color to hide from its enemies.
14. It ejects a black fluid in the surrounding water to hide when attacked by enemies.
15. The bacteria won't get the sugar it needs and the plant won't get the nitrogen it needs.
16. A dark green layer is formed on the bread, so the bread gets rotten.
17. The Earth's surface will be covered with the bodies of dead organisms.

6 Answer each of the following:

1. Green - Green
2. 1) magnet - copper coil - lamp 2) dynamo 3) mechanical - electric
3. 1) battery - copper coil - iron nail 2) electromagnet 3) electric - magnetic
4. 1) compass 2) magnetic needle
- 3) identify the main four geographical directions.

7 How can you separate each of the following mixtures:

1. Filtration
2. Filtration
3. Dissolving the mixture in water then evaporation.
4. Magnetic attraction

8 Mention the following:

1. Traveling of light in a straight line - Transmitting of light through different materials - Light reflection - Light refraction - Light separation.
2. Regular reflection: It is the reflection of light when it falls on a smooth and shiny reflection surface, where light rays are reflected directed in one direction.
Irregular reflection: It is the reflection of light when it falls on a rough reflecting surface, where light rays are reflected and scattered in different directions.
3. Light traveling in a straight line.
4. Separated easily - keeps its properties - mixed at any ratio.
5. Solute: It is the substance which dissolves in a solvent.
Solvent: It is the liquid substance in which a solute dissolves.
6. Predator: It devours the other living organism.
Prey: It is the devoured living organism.
7. Parasite: It is the living organisms that benefits from the other.
Host: It is the living organism that gets harmed.

9 Identify the food relation among the following organisms:

- | | |
|-----------------|-----------------|
| 1. Commensalism | 5. Predation |
| 2. Parasitism | 6. Saprophytism |
| 3. Mutualism | 7. Parasitism |
| 4. Predation | |